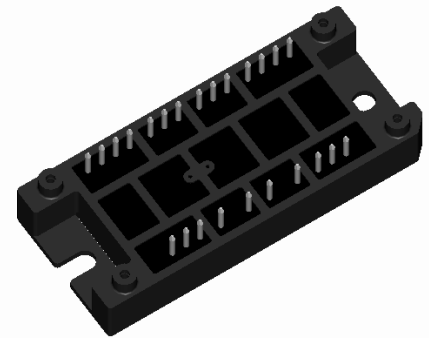
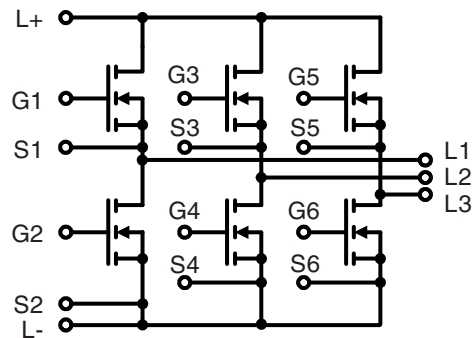


Three phase full bridge with Trench MOSFETs

$$V_{DSS} = 100 \text{ V}$$

$$R_{DSon} = 3.6 \text{ m}\Omega$$

$$I_{D25} = 210 \text{ A}$$



MOSFETs

Symbol	Conditions	Maximum Ratings	
V_{DSS}	$T_{VJ} = 25^{\circ}\text{C to } 150^{\circ}\text{C}$	100	V
V_{GS}		± 20	V
I_{D25}	$T_C = 25^{\circ}\text{C}$	210	A
I_{D80}	$T_C = 80^{\circ}\text{C}$	170	A
I_{D25}	$T_C = 25^{\circ}\text{C}$ (diode)	210	A
I_{D80}	$T_C = 80^{\circ}\text{C}$ (diode)	170	A

Applications

AC drives

- in automobiles and trucks
 - electric power steering
 - starter generator
 - etc...

- in industrial vehicles
 - propulsion drives
 - fork lift drives

- in battery supplied equipment

Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^{\circ}\text{C}$, unless otherwise specified)		
		min.	typ.	max.
R_{DSon}	$V_{GS} = 10 \text{ V}; I_D = 100 \text{ A}$		3.6	5.2
V_{GSth}	$V_{DS} = 20 \text{ V}; I_D = 2 \text{ mA}$	2		4
I_{DSS}	$V_{DS} = 100 \text{ V}; V_{GS} = 0 \text{ V}; T_{VJ} = 25^{\circ}\text{C}$ $T_{VJ} = 125^{\circ}\text{C}$		0.25	0.02
I_{GSS}	$V_{GS} = \pm 20 \text{ V}; V_{DS} = 0 \text{ V}$			0.2
Q_g	$V_{GS} = 10 \text{ V}; V_{DS} = 80 \text{ V}; I_D = 200 \text{ A}$		430	nC
Q_{gs}			90	nC
Q_{gd}			180	nC
$t_{d(on)}$	$V_{GS} = 10 \text{ V}; V_{DS} = 50 \text{ V};$ $I_D = 50 \text{ A}; R_G = 2.7 \Omega$		40	ns
t_r			100	ns
$t_{d(off)}$			260	ns
t_f			100	ns
V_F	(diode) $I_F = 100 \text{ A}; V_{GS} = 0 \text{ V}$		1.0	1.5
t_{rr}	(diode) $I_F = 40 \text{ A}; -di/dt = 200 \text{ A}/\mu\text{s}; V_{DS} = 30 \text{ V}$		100	ns
R_{thJC}	with heat transfer paste			0.26
R_{thJH}			0.51	K/W

Features

- MOSFETs in trench technology:
 - low R_{DSon}
 - optimized intrinsic reverse diode
- package:
 - high level of integration
 - solder terminals for PCB mounting
 - isolated DCB ceramic base plate with optimized heat transfer

IXYS reserves the right to change limits, test conditions and dimensions.

